

## **REMARKS**

Claims 1, 2 and 4 to 6, 13, 15 and 16 to 25 are pending in the present application. Claims 3, 7, and 14 are cancelled. Claims 1, 2, 15 to 22 are withdrawn. Claims 23 to 25 are new. Support for new claim 23 can be found in original claim 5. Support for new claims 24 and 25 can be found in claims 1 and 2 and throughout the specification.

On page 2, the Office objected to the specification disclosure because of the use of the trademark VASELINE. The Office noted that the trademark should be capitalized wherever it appears and be accompanied by the generic terminology.

In response, applicant has amended the specification to capitalize "VASELINE" wherever it appears and to have it followed by the generic term "petrolatum."

On page 3, the Office objected to claim 7 because it is identical to claim 6.

In response, applicant cancelled claim 7.

Also on page 3, the Office rejected claims 4-13 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the Office identified claims 4 and 9 as containing the trademark/trade name VASELINE.

In response, applicant has replaced the word VASELINE with the generic word petrolatum. Applicant also notes that in the original German text of the PCT application the term "Vaseline" was used, a term which appears to have no trademark status in German, with Germany being the PCT filing country.

On page 4, the Office expressed the opinion that claim 5 does not clearly set forth the metes and bounds of the patent protection desired.

In response, applicant has cancelled the terms that raised the indefiniteness concerns and has introduced a dependent claim directed to the subject matter cancelled from claim 5 as new claim 23.

Also on page 4, the Office asked that the term "chloroaerosol" in claim 10 be clarified.

In response, applicant has amended the claims to refer to "cholorocresol" as set forth in the specification in the paragraph starting on line 4 of page 4 (see preliminary amendment dated April 13, 2006).

On page 5, the Office expressed the opinion that the term "cetyl stearyl alcohol" used in claims 8 and 9 should be cetyl or stearyl alcohol and therefore searched the term accordingly.

Cetyl stearyl alcohol, also often referred to cetearyl alcohol or cetostearyl alcohol, NF is a term well established in the art, having been assigned CAS no. 8038-54-8 (see attached printout from <http://www.chemindustry.com>). Accordingly, applicant submits that the term is properly utilized in this claim. Consideration of the term is respectfully requested.

On page 6, the Office rejected claim 4 under 35 U.S.C. 103(a) as being unpatentable over Presnov et al. (hereinafter "Presnov") in view of Arefyeva et al. (hereinafter "Arefyeva").

The Office acknowledged that Presnov does not explicitly teach the use of mannitol or the provided ratios. However, the Office expressed the opinion that Arefyeva teaches injectable cis-oxoplatin that includes the use of mannitol as a known diurectic that does not interfere with cis-oxoplatin activity against tumors, but assures less pronounced structural disorders in the kidney as compared to cis-oxoplatin alone.

Citing *In re Aller*, the Office also concluded that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to make a pharmaceutical agent comprising cis-oxoplatin and mannitol in an aqueous solution for injection, as taught by Presnow in view of Arefyeva.

In response, applicant have amended claim 4 to clarify, in the body of the claim, that the claimed agent is a "pharmaceutical agent" and has substantially no toxic side effects. Support for this amendment can be found throughout the specification, e.g., in the first paragraph on page 10.

Arefyeva discloses that oxoplatin has toxic side effects. In particular, Arefyeva reported changes in the renal tissue including acute renal failure after high dose treatment. Arefyeva's test animals were treated in parallel with diurectics, such as diacarb, furosemid, and mannitol to assure less pronounced structural disorders in the kidney.

It is common to treat a patient during chemotherapy with a multitude of medicaments, some of which are exclusively used to reduce adverse side effects of the chemotherapeutic(s). In Arefyeva, the two substances in issue, namely oxoplatin and diurectic(s), are administered separately, that is, they are not contacted, e.g. mixed, before use. The diurectic of Arefyeva has the purpose to alleviate the side effects of oxoplatin symptomatically, while the composition of the present invention seeks to prevent significant side effects before they occur. Applicant achieves this by contacting, e.g. mixing, oxoplatin with the base material of the present invention to create the claimed pharmaceutical agent. This is an important difference to the administration of a diurectic according to Arefyeva which only serves to alleviate of adverse side effect(s) symptomatically, while the adverse side effect(s) themselves are not suppressed. In contrast, the pharmaceutical agent of the present invention, however, aims at prevention rather than solely alleviation post facto. Thus, as specified in claim 4, the pharmaceutical agent of the present invention, has substantially no toxic side effects.

As described on page 10 of the specification, biotransformability of the cis-oxoplatin is advantageous. Lack of the same, may prevent that sufficient amounts platinum (II) compounds are formed.

The inventor observed that a permanent inclusion of cis-oxoplatin into a base material generally seems to lead to a chemical transformation resulting not only in many adducts (hazardous products high in side effects) which already starts during the production process, but also prevents subsequent biotransformation in the body. Claim 4 has been amended to clarify that,

in contrast, the pharmaceutical agent of the present invention has substantially no toxic side effects (see also paragraph bridging pages 45 and 46).

Applicant discovered a pharmaceutical agent that allows the effective use of oxoplatin in combination with a base material so that the resulting pharmaceutical agent has substantially no toxic side effects. The disclosure describes a number of advantages of certain embodiments of the pharmaceutical agent. Next to safety and efficiency, the disclosure explains, for example, on page 9, starting on line 6, that “pharmaceutical agents comprising cis-oxoplatin and the base materials defined according to the invention have a shorter half-life in the body than comparable cis-platinum compounds; that is, the strain on important metabolic organs such as liver or kidneys caused by the compounds according to the invention is lower.”

Other advantages of certain embodiments of the invention include favorable distribution in the body, controlled release associated with an uniform effect and a reduced ingestion frequency etc. as discussed in detail in the specification, starting on page 7, first full paragraph.

In view of the above and especially in view of the expectation of toxic side effect created by the references, applicant submits that the person of skill in the art would not have been motivated to combine them and certainly not to arrive at the invention as currently claimed.

On page 8, the Office rejected claims 4 and 12 under 35 U.S.C. 103(a) as being unpatentable over Presnov et al (1985) in view of US Patent 5,272,137 to Blase et al. (hereinafter “Blase”) and in view of US Patent Publication 2004/0001801 to Madison et al (hereinafter “Madison”).

Blase does not mention oxoplatin. The Office cites Blase for its disclosure of sorbitol as a sweetener to contribute to a palatable liquid dosage form, the stated objective of Blase. The rejected claims recite sorbitol in a cream and in a solution for injection or infusion.

The Office provided a motivation rationale in support of this rejection, expressing the opinion that there would have been motivation to combine the prior art teachings to arrive at the present with a reasonable expectation of success.

Applicant respectfully disagrees and submits, that, considering the explicit claim language and the teaching of Blase outlined above, there would have been little incentive to use sorbitol in a cream or a solution for injection or infusion as set forth in the rejected claims.

As far as Madison is concerned, this publication discloses the use of cis-platin as part of a conjugate, but not the use of cis-oxoplatin (neither paragraph 1205, nor claims 16 or 76 as cited by the Office mention cis-oxoplatin). Differences between cis-platin and cis-oxoplatin are outlined in the current specification, e.g., on page 9. Madison is also further discussed below.

On page 9, the Office rejected claims 4 to 6 and 10 to 13 under 35 U.S.C. 103(a) as being unpatentable over Presnov in view of Madison et al.

The Office conceded that Pesnov does not explicitly teach a capsule, gel, suppository, infusion or tablet and excipients.

However, the Office expressed the opinion that Madison teaches that a capsule, gel, suppository, infusion or tablets are well known in the art. The Office refers to paragraphs, 1216 and 1222 of Madison as well as 1188 (silicon dioxide and mannitol as binders), 1182 (cellulose derivatives as excipients), 1188 (steareate as lubricant in solid dosage form), 1205 (sodium hydroxide for pH adjustment), 0216 (sodium hydrogen phosphate dehydrate), 1178/1205 (benzyl alcohol as an antimicrobial agent), 1188 (polysorbate 80 as an emulsifying agent) and 1205 (fine particles containing chlorine are sodium chloride).

While further acknowledging that the art does not teach the exact amounts/weight of each component as claimed, the Office came to the conclusion that as all of these components are well known in the art for use in pharmaceutical compositions and the person skilled in the art would have been motivated to arrive at the present invention.

Madison discloses a conjugate comprising cis-platin. Cis -platin and its toxic side effects are discussed in the present specification, e.g., in the paragraph bridging page 1 and 2 and first full paragraph on page 2. Madison focus is on a conjugate comprising a peptidic substrate (see paragraph 223 and following) that is linked to a wide variety of therapeutic agents, one of many being cis-platin. His goal, quite consistent with that of others that have designed conjugates, is a targeted delivery of certain therapeutic agents that frequently not only attack tumor cells but other proliferating cells including those of vital organs. Thus, Madison seeks to achieve

tolerability of a wide variety of therapeutic agents by attaching the agents to peptidic substrates. Madison makes clear that any reduction in toxicity of the therapeutic agent of his conjugate is a function of the conjugate/conjugation to the peptidic substrate (see para. 026 and following).

The present invention is directed to a pharmaceutical agent comprising defined combinations of cis-oxoplatin and base materials. Such a pharmaceutical agent should have substantially no toxic side effects as now positively recited in the claims.

While, the cis-oxoplatin of the present invention may be “coupled” such a coupling is to the carrier materials (see page 7, lines 18 to 22, see also lines 10 to 14 for the usage of the term carrier in this context), not to the peptidic substrates of Madison. Applicant submits the person skilled in the art considering Presnov and Madison, might rather than arriving at the present invention at best (which applicant, however, does not concede) have come to the conclusion that a conjugate comprising a peptidic substrate according to Madison might allow for the production of a viable pharmaceutical agent. However, the combination of Presnov and Madison does not suggest the pharmaceutical agent as presently claimed, let alone provide any expectation of success.

On page 11, the Office rejected claims 4, 8, and 9 under 35 U.S.C. 103(a) as being unpatentable over Presnov in view of Madison et al., and in view of US Patent 6,534,070 to Franke et al (hereinafter “Franke”) and in view of US Patent Publication 2003/0064494 to Kumar et al (hereinafter “Kumar”).

Franke and Kumar are cited for disclosing petrolatum and polysorbates. Neither Franke nor Kumar disclose cis-oxoplatin. Neither Franke nor Kumar address the deficiencies of the combination of Presnov and Madison outlined above.

Accordingly, applicant respectfully submits that no *prima face* case of obviousness of the invention as presently claimed has been established.

#### **Information Disclosure Statement (IDS)**

The Office indicated that the reference Konovalova et al. (“Antineoplastic Effect of Complex

Platinum (IV) Compounds," Doklady Akademii Nauk SSSR, 1977, vol. 234, no. 1, pp.:223-6) was not considered by the Office by crossing it out on applicant's IDS form.

Applicant timely filed the IDS on May 7, 2007, citing Konovalova et al. ("Antineoplastic Effect of Complex Platinum (IV) Compounds," Doklady Akademii Nauk SSSR, 1977, vol. 234, no. 1, pp.:223-6). This reference was listed in the International Search Report (ISR) for the corresponding application PCT/DE2004/002297, filed April 5, 2005 which was also submitted to the USPTO along with the reference in question concurrently with the IDS.

Applicant would like to bring to the Office's attention MPEP §609.04(a)III, stating that where the information listed is not in the English language, but was cited in a search report or other action by a foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office. This may be an explanation of which portion of the reference is particularly relevant, to which claims it applies, or merely an "X", "Y", or "A" indication on a search report.

In regards to Konovalova et al, the applicant has met with these MPEP §609.04(a)III requirements. The ISR was filed in English and did indicate the relevance of the reference with an "X". Appropriate consideration of the Konovalova et al reference is therefore respectfully requested.

Applicant has shown above that the invention as presently claimed is non-obvious over the cited art. If any issue remains, the Office is urged to call the undersigned at the number provided below.

The fees required with this response are submitted herewith. However, the Office is authorized to charge undersigned's deposit account 50-3135 as required.

Respectfully submitted,

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**March 19, 2009**